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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,881

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Gerd Bierbaum

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FITCH, EVEN, TABIN & FLANNERY  
P. O. BOX 18415  
WASHINGTON, DC 20036

EXAMINER

HOANG, ANN THI

ART UNIT

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2836

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/565,881	<b>Applicant(s)</b> BIERBAUM ET AL.	
	<b>Examiner</b> ANN T. HOANG	<b>Art Unit</b> 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/25/06</u> .                                                 | 6) <input type="checkbox"/> Other: ____.                          |

## DETAILED ACTION

### *Claim Objections*

1. Claim 1 is objected to because it appears that “arrangement for protection” in line 1 should be changed to --protective arrangement-- in order to be consistent with the preamble of dependent claims 2-11. Appropriate correction is required.
2. Claim 1 is objected to because it recites in lines 12-14 “a main line (5) being provided, which is electrically connected to the starting assistance contact section (11) as a function of the switch position of the switch (12),” yet Fig. 2 shows main line (5) being electrically connected to the starting assistance contact section (11) regardless of the switch position of the switch (12). For purposes of examination, the claim limitation will be read as “a main line (5) being provided, which is electrically connected to the connecting section (10) as a function of the switch position of the switch (12),” since this would be more accurate to Fig. 2. Appropriate correction is required.
3. Claim 1 is objected to because there is insufficient antecedent basis for “the first device” in line 15 of the claim. For purposes of examination, “electrical device” will be read as --first electrical device-- in lines 1 and 3 of claim 1, and “first device” will be read as --first electrical device-- in line 15 of claim 1, line 2 of claim 3, and line 3 of claim 10. Appropriate correction is required.
4. Claim 9 is objected to because there is insufficient antecedent basis for “the explosive switch” in line 3 of the claim, since preceding claim 8 recites switch (12) as being alternatively in the form of a relay or a pyrotechnic explosive switch. For

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purposes of examination, the limitation “fires the explosive switch” in line 3 of claim 9 will be considered only if “the switch is in the form of a pyrotechnic explosive switch,” as recited as one of two alternatives in preceding claim 8. Appropriate correction is required.

5. Claim 10 is objected to because there is insufficient antecedent basis for “the second device” in line 5 of the claim. It appears that “the second device” should be changed to --the second electrical device--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 3, 4, 6 and 8-11 are rejected under 35 U.S.C. 102(e) as being anticipated by George et al. (US 6,803,743).

Regarding claim 1, George et al. teaches an arrangement for protection of a first electrical device (22)

having a pole terminal (14) which is connected to one pole of a battery (12) and to which the first electrical device (22) is connected,

having protective contact unit (18, 24) which has a connecting section (18), which is electrically connected directly to the pole terminal (14), and a starting assistance contact section (24), with the connecting section (18) and the starting assistance contact section (24) being electrically connected in series by means of an intermediate closed switch (28), and

having an evaluation circuit (44) which opens the switch (28) as soon as it detects a fault current, with

a main line being provided, which is electrically connected to the connecting section (18) as a function of the switch position of the switch (28) and leads to at least one second electrical device (12'), and

the first electrical device (22) being electrically connected to the pole terminal (14), bypassing the main line and independently of the switch position of the switch (28).

See Figs. 1 and 2, 2:18-56, 3:28-65, 4:26-54, 5:47-67, 6:1-12 and 6:29-52. The main line is shown as the connection between starting assistance contact section (24) and second electrical device (12') in Fig. 2. The detection of fault current is discussed in 6:1-4.

Regarding claim 3, George et al. teaches that a secondary line is provided, which leads to the first electrical device (22) and is connected to pole terminal (14) independently of the main line. See Fig. 1, which shows the secondary line as a connection between pole terminal (14) and first electrical device (22).

Regarding claim 4, George et al. teaches that the switch (28) disconnects the electrical connection between the starting assistance contact section (24) and the

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connecting section (18) as soon as a predetermined current is flowing through a control line (50). See Fig. 1 and 4:36-54.

Regarding claim 6, George et al. teaches that the starting assistance contact section (24) has an extension section which projects beyond the pole from the battery (12). See Fig. 5, 7:66-67 and 8:1-2.

Regarding claim 8, George et al. teaches that the switch (28) is in the form of a relay which switches when current is flowing through a control line (50). See Fig. 1, 3:58-65 and 4:36-54. "Any kind of switch including an electromechanical device that is actuated by a coil," as discussed in 3:58-65, is interpreted to be a relay.

Regarding claim 9, it is understood that the control line (50) of George et al. contains a heating section which is heated when current is flowing through it, as current is known to have a heating effect when flowing through a conductive line. See Fig. 1 and 4:36-54.

Regarding claim 10, George et al. teaches that the first electrical device (22) is a vehicle power supply system in a motor vehicle. See 3:43-45, which discusses that first electrical device (22) may be a generator.

Regarding claim 11, George et al. teaches that the protective arrangement is used in a motor vehicle for protection of a vehicle power supply system against fault currents while providing and receiving starting assistance. See abstract and 1:7-13.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over George et al. (US 6,803,743) in view of Liu (US 6,632,103).

Regarding claim 2, George et al. teaches all the limitations of claim 1, as discussed above. The reference does not disclose a current sensor.

However, Liu discloses a current sensor (50) which senses the current level in a main line and is connected to an evaluation circuit (10) in order to transmit a corresponding sensor signal. See Fig. 2 and 3:25-32. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the current sensor of Liu to sense the current level in the main line of the protective arrangement of George et al. in order to open the switch upon detection of a faulty current condition in the main line. In the combination of George et al. and Liu, the current sensor would be arranged on the main line and the starting assistance contact section would be located between the current sensor and the switch.

10. Claim 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over George et al. (US 6,803,743) in view of Taylor, III (US 4,255,502).

Regarding claim 5, George et al. teaches all the limitations of claim 1, as discussed above. The reference does not disclose an electrically insulating cover.

However, Taylor, III discloses an electrically insulating cover (10) that completely covers a battery (12), including its pole terminal, except for a starting assistance contact section (14). The cover is made of insulating fabric, which would be electrically insulating. See abstract and Figs. 1-3. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the electrically insulating cover of Taylor, III with the protective arrangement of George et al. in order to provide a rigid, protective cover to the battery while still allowing easy access to the starting assistance contact section.

Regarding claim 7, George et al. teaches that the evaluation circuit (44) is arranged within an area (10) which is internal to the battery (12). See Fig. 5. In the combination of George et al. and Taylor, III, this area would be bounded by the cover (10) of Taylor, III, which covers the entire battery (12). See Figs. 1-3 of Taylor, III.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANN T. HOANG, whose telephone number is 571-272-2724. The examiner can normally be reached on Mon-Thurs and every other Fri, 8 a.m. to 6 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry, can be reached at 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Sherry/  
Supervisory Patent Examiner, Art Unit 2836

ATH  
6/21/08